

**REMARKS**

Entry of this amendment, reconsideration and withdrawal of all grounds of objection and rejection, allowance of the present claims are respectfully requested in light of the above amendment and the following remarks.

The title of the claimed invention has been changed again as requested in the Final Office Action. Should the Examiner not find the title acceptable, please substitute a title of your choosing.

Applicants have amended claims 1, 6 and 9 with regard to the objection and Examiner's suggestion regarding the audio source signals.

**Summary of the Rejections:**

- (1) Claim 11 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Eriksson et al. (U.S. 5,033,082 hereafter "Eriksson").
- (2) Claims 1-3 and 6-8 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious to a person of ordinary skill in the art over Eriksson in view of Houser et al. (U.S. 5,774,859, hereafter "Houser").
- (3) Claims 4 and 9-10 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Eriksson in view of Houser, and further in view of Allen et al (U.S. 5,485,515 hereafter "Allen").
- (4) Claims 1 and 7 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Eriksson in view of Linder (WO 98/01956).

**Applicants' Traversal:**

Base claims 1, 7 and 11 have been amended to recite, *inter alia*, that:

the at least two audio source signals contribute to the audio signal [from] input to the microphone from being within a proximity of a sensitivity range of the microphone.

Thus, not only are the audio source signals input to the audio cancellation module, but they are also picked up by the sensitivity of the microphone. This means that the audio signal picked up by the microphone is a composite of speech input plus audio source signals.

Rather than using a filtration method, as disclosed by Eriksson, which would separate sounds by frequency, the instantly claimed invention may cancel sounds that have been picked up by the microphone at a much lower volume than input as independent audio signals. This feature is an improvement over prior art such as Eriksson. In particular, in a filtration system of the prior art that identifies someone else's speech as background noise, the filtration can interfere with the speech input that is desired to be recognized by the system. In adults of the same gender there is a tendency for some overlap regarding voice frequency.

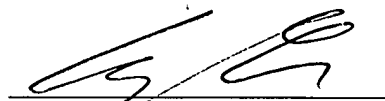
It is respectfully submitted that none of the present claims would have been anticipated by Eriksson, nor would they have been obvious to a person of ordinary skill in the art of the combinations of art over Eriksson in view of Houser, or Eriksson in view of Houser and further in view of Allen, or over Eriksson in view of Linder (WO 98/01956). None of the combinations of references make any suggestion, teachings or provide any disclosure that would have made the instant claims obvious.

Reconsideration and withdrawal of all grounds of objection and rejection are respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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(Name of Registered Rep.)

2/25/03  
(Signature and Date)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Paul Kaufholz  
SERIAL NO.: 09/666,398 EXAMINER: Donald L. Storm  
FILED: September 20, 2000 ART UNIT: 2654  
FOR: SPEECH RECOGNITION APPARATS AND CONSUMER  
ELECTRONIC SYSTEM

Assistant Commissioner for Patents  
Box AF  
Washington, DC 20231

**MARKED UP VERSION SHOWING CHANGES MADE**

Dear Sir:

In response to the Office Action dated January 14, 2003, please amend the application as follows:

**IN THE TITLE:**

Please change the title of the invention to -- SPEECH RECOGNITION  
APPARATUS HAVING MULTIPLE AUDIO INPUTS TO CANCEL BACKGROUND  
NOISE FROM INPUT SPEECH--.

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Twice Amended) A speech recognition apparatus comprising:  
an audio cancellation module, including:

an audio input for receiving an audio signal from a microphone;

[an] at least two audio inputs for receiving at least two audio source signals from respective independent audio sources, both the at least two audio source signals contribute to the audio signal [from] input to the microphone from being within a proximity of the sensitivity range of the microphone,

wherein the audio cancellation module being operative to produce a speech signal by canceling the at least two audio source signals from the audio signal [from] that are received by the microphone; and

a speech recognizer for recognizing at least part of the speech signal.

6. (Twice Amended) A speech recognition apparatus as claimed in claim 1, wherein the speech recognition apparatus includes at least one audio input for receiving an external audio source signal from an audio source unit that is external to the speech recognition apparatus; the audio source signal from the audio source unit that is external to the speech recognition apparatus being received substantially for the purpose of canceling [this] the external audio source signal from the microphone signal.

7. (Twice Amended) A consumer electronics system comprising:

at least two audio source apparatuses;

an audio cancellation module, including:

an audio input for receiving an audio signal from a microphone; and

at least two audio inputs for receiving independent audio source signals from respective ones of the audio source apparatuses, at least two of the independent

audio source signals contribute to the audio signal from the microphone by a proximity of the at least two audio source signals to within a sensitivity range of the microphone;

the audio cancellation module being operative to produce a speech signal by canceling the at least two independent audio source signals from the audio signal from the microphone; and

a speech recognizer for recognizing at least part of the speech signal.

9. (Twice Amended) A system as claimed in claim 8, wherein at least one of the independent audio source signals is received via the communication network from the associated audio source apparatus.

11. (Twice Amended) An audio cancellation module, comprising:

an audio input for receiving an audio signal from a microphone; and

at least two audio inputs for receiving audio source signals from respective independent audio sources, both the at least two audio source signals contribute to the audio signal from the microphone from being within a proximity to a sensitivity range of the microphone;

the audio cancellation module being operative to produce a speech signal by canceling the at least two audio source signals from the audio signal received from the microphone.